| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/624,256 | 07/22/2003 | Kan Yan | Inno-015 | 7350 |

| 29956          7590          04/13/2007 | EXAMINER |
|---|---|
| TIMOTHY P. O'HAGAN<br>8710 KILKENNY CT<br>FORT MYERS, FL 33912 | CHOU, ALBERT T |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2616 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 04/13/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | Application No. | Applicant(s) |
|---|---|---|---|
| | | 10/624,256 | YAN ET AL. |
| *Office Action Summary* | | Examiner | Art Unit |
| | | Albert T. Chou | 2616 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 July 2003*.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,14 and 15* is/are rejected.

7)☒ Claim(s) *3-13 and 16-26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1.     The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 14 and 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent No. 7,002,995 to Chow et al. (hereinafter "Chow") in view

of Comer, Douglas E., Internetworking With TCP/IP Vol. I: Principles, Protocols and

Architecture, 4th Edition (hereinafter "Comer").

Regarding claim 1, Chow teaches a multi-media terminal adapter **[Figs. 1 & 8;**

**Media Terminal Adapter MTA 104]** for coupling to a network access module over a

communication link, the network access module for communicating IP frames over a

frame switched network, the multi-media terminal adapter comprising:

a wide area network interface coupled to the communication link for exchanging

IP frames with the access module **[Fig. 8; Broadband Transport Interface 818]**;

a local area network interface for receiving outbound data client IP frames from

each of a plurality of data clients **[Fig. 8; Ethernet PHY 808 & Ethernet Port 820]**,

each outbound data client IP frame comprising local socket information, the local socket

information comprising: a source address that includes a local area network IP address;

and a data client port number **[Figs. 1 & 8; It is well-known in the art and thus**

**obvious in Chow that each IP data packet transmitting in a LAN comprises a local**

**source IP address and a source port number]**;

a VoIP module for generating outbound VoIP frames **[Fig. 8; VoIP/Ethernet**

**Processor 806; col. 19, lines 56-65]**, each outbound VoIP frame comprising digital

audio media and socket information that includes a VoIP port number **[Figs. 1 & 8; It is**

**well-known in the art and thus obvious in Chow that each VoIP packet comprises**

**a source port number and a payload portion containing the audio data]**;

a router module **[Fig. 8; Main CPU 804; col. 19, lines 47-55]** coupled between

the wide area network interface and each of the VoIP module and the local area

network interface, the router comprising:

means for receiving the outbound data client IP frames and the outbound VoIP

frames **[Fig. 8; Main CPU 804 receives data IP frames and VoIP frames from**

**VoIP/Ethernet Processor 806; col. 19, lines 47-55, lines 62-64]**;

means for performing port translation on the outbound data client IP frames to

generate translated outbound data client IP frames, each translated outbound data

client IP frame comprising payload from the outbound data client IP frame and global

socket information comprising a global IP address of the multi-media terminal adapter

**[Figs. 1 & 8; It is well-known in the art and thus obvious in Chow that Main CPU**

**(router) 804 / VoIP Ethernet Processor 806 uses a global IP address assigned by a**

**DHCP in order to route IP frame, which comprising a payload, from a LAN to a**

**public IP network; col. 9, lines 50-52, col. 19, lines 47-55]**; and

means for providing the outbound VoIP frames and the translated outbound data client IP frames to the wide area network interface **[Fig. 8; Main CPU (Router) 804, Broadband Transport Interface 818; col. 19, lines 30-40, 47-55, col. 20, lines 12-19]**.

Chow does not expressly teach the outbound VoIP frames include a VoIP port number selected from a first group of port numbers exclusively reserved for use by the VoIP module; and, to generate translated outbound data client IP frames, a translated port number selected from a second group of port numbers that is mutually exclusive of the first group of port numbers; and exclusively reserved for port translation of outbound data client IP frames.

Comer teaches the reserved and available TCP and UDP port numbers in accordance with TCP and UDP protocols, and how should protocol port numbers be assigned **[Sec. 12.9, Fig. 12.6, pp. 204-205, Sec. 13.29, Fig. 13.16, pp. 243-244]**.

Applicants have not disclosed that "*translated port number selected from a second group of port numbers that is mutually exclusive of the first group of port numbers; and exclusively reserved for port translation of outbound data client IP frames*" provides an advantage, is used for a particular purpose, or solves a stated problem. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Chow's invention by assigning available TCP and UDP ports for suitable applications, which can take an adavantage of the characteristics of TCP or UDP protocol, since TCP and UDP protocols are well-known in the art.

The motivation for combining the reference teachings would be to assigning, but excluding those well-known port assignments, available TCP ports to those applications which requiring reliable stream delivery, such as contents integerity-sensitive data transactions or file transfers, and avaialble UDP ports to those applications which are delay-sensitive but relatively erro-tolerable, such as packet voice applciation.

Regarding claim 2, Chow teaches the multi-media terminal adapter, wherein the VoIP module further includes a call set up module for establishing inbound VoIP communication channels **[Fig. 1; Network Server Platform NSP 108 & Network Servers 138; col. 8, line 57 – col. 9, line 2, col. 9, lines 30-54]** by providing a remote VoIP device with the global IP address and an inbound VoIP port number selected from the first group of port numbers **[Figs. 1 & 8; It is well-known in the art and thus obvious in Chow that Main CPU (router) 804 / VoIP Ethernet Processor 806 uses a global IP address assigned by a DHCP in order to route IP frame, which comprising a source port number and a payload, from a LAN to a public IP network; col. 9, lines 50-52, col. 19, lines 47-55]**.

Regarding claim 14, Chow teaches a method of sharing a single connection to an access module, that is coupled to a frame switched network, amongst a VoIP client and a plurality of data clients coupled to a local area network **[Figs. 1 & 8]**, the method comprising:

receiving outbound data client IP frames from each of the plurality of data clients **[Fig. 8; Ethernet Port 820, VoIP/Ethernet Processor 806; col. 19, lines 56-65, col. 20, lines 20-25]**, each outbound data client IP frame comprising local socket information that includes a local area network IP address and a data client port number **[Figs. 1 & 8; It is well-known in the art and thus obvious in Chow that each IP data packet transmitting in a LAN comprises a local source IP address and a source port number]**;

generating outbound VoIP frames **[Fig. 8; Analog Telephony Port 822, VoIP/Ethernet Processor 806; col. 19, lines 56-65, col. 20, lines 26-40]**, each outbound VoIP frame comprising: digital audio data payload representing a portion of an audio session; and socket information that includes a VoIP port number **[Figs. 1 & 8; It is well-known in the art and thus obvious in Chow that each VoIP packet comprises a source port number and a payload portion containing the audio data]**;

performing port translation on the outbound data client IP frames to generate translated outbound data client IP frames, each translated outbound data client IP frame comprising payload from the outbound data client IP frame and global socket information comprising a global IP address of the multi-media terminal adapter **[Figs. 1 & 8; It is well-known in the art and thus obvious in Chow that Main CPU (router) 804 / VoIP Ethernet Processor 806 uses a global IP address assigned by a DHCP in order to route IP frame which comprising a payload from a LAN to a public IP network; col. 9, lines 50-52, col. 19, lines 47-55]**; and

providing the outbound VoIP frames and the translated outbound data client IP

frames to the access module **[Fig. 8; Main CPU (Router) 804, Broadband Transport**

**Interface 818; col. 19, lines 30-40, 47-55, col. 20, lines 12-19]**.

Chow does not expressly teach the outbound VoIP frames include a VoIP port

number selected from a first group of port numbers exclusively reserved for use by the

VoIP module; and, to generate translated outbound data client IP frames, a translated

port number selected from a second group of port numbers that is mutually exclusive of

the first group of port numbers; and exclusively reserved for port translation of outbound

data client IP frames.

Comer teaches the reserved and available TCP and UDP port numbers in

accordance with TCP and UDP protocols, and how should protocol port numbers be

assigned **[Sec. 12.9, Fig. 12.6, pp. 204-205, Sec. 13.29, Fig. 13.16, pp. 243-244]**.

Applicants have not disclosed that *"translated port number selected from a*

*second group of port numbers that is mutually exclusive of the first group of port*

*numbers; and exclusively reserved for port translation of outbound data client IP*

*frames"* provides an advantage, is used for a particular purpose, or solves a stated

problem. Therefore, It would have been obvious to a person of ordinary skill in the art at

the time of the invention to modify Chow's invention by assigning available TCP and

UDP ports for suitable applications, which can take an adavantage of the characteristics

of TCP or UDP protocol, since TCP and UDP protocols are well-known in the art.

The motivation for combining the reference teachings would be to assigning, but excluding those well-known port assignments, available TCP ports to those applications which requiring reliable stream delivery, such as contents integerity-sensitive data transactions or file transfers, and avaialble UDP ports to those applications which are delay-sensitive but relatively erro-tolerable, such as packet voice applciation.

Regarding claim 15, Chow teaches the method further comprising establishing inbound VoIP communication channels **[Fig. 1; Network Server Platform NSP 108 & Network Servers 138; col. 8, line 57 – col. 9, line 2, col. 9, lines 30-54]** by providing a remote VoIP device with the global IP address and an inbound VoIP port number selected from the first group of port numbers **[Figs. 1 & 8; It is well-known in the art and thus obvious in Chow that Main CPU (router) 804 / VoIP Ethernet Processor 806 uses a global IP address assigned by a DHCP in order to route IP frame, which comprising a source port number and a payload, from a LAN to a public IP network; col. 9, lines 50-52, col. 19, lines 47-55]**.

## *Allowable Subject Matter*

2.    Claims 3-13 and 16-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## *Conclusion*

3.      The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent No. 7,035,289 to Devine et al. disclose "Communications Switching Architecture"

- US Patent No. 7,142,660 to Freyman et al. disclose "System And Method For Adapting Remote Access Telephony Network National Deviations"

- US Patent No. 6,944,167 to McPherson discloses "Method And Apparatus For Dynamic Allocation Of Private Address Space Based Upon Domain Name Service Queries"

- US Patent No. 6,128,664 to Yanagidate et al. disclose "Address-Translating Connection Device"

4.      Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert T. Chou whose telephone number is 571-272-6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
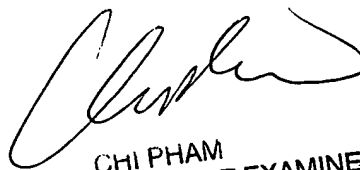
Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Albert T. Chou

April 10, 2007     *AC*

CHI PHAM
SUPERVISORY PATENT EXAMINER